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ABSTRACT

In order to meet the needs of all the Armed Services, new forms of the Armed Services Vocational Aptitude Battery (ASVAB) must periodically be developed, refined, and standardized on an appropriate normative sample. Since one of the uses of the ASVAB is to determine candidate suitability for military service, it is necessary for the standardization sample to be broadly representative of the national applicant body; and since the preparation of replacement ASVAB Forms constitutes a significant revision, parallelism of new forms with each other and with previous ASVAB Forms must be achieved. The purpose of the reported research was to conduct, edit, test on a national sample, and standardize three new versions of ASVAB, which would become ASVAB Forms 8, 9, and 10. Operational Form 7 was suggested as the example for item selection and the criterion for comparability with previous ASVAB Forms. (Author)

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AIR FORCE HUMAN RESOURCES LABORATORY

DEVELOPMENT OF THE ARMED SERVICES VOCATIONAL APTITUDE BATTERY: FORMS 8, 9, AND 10

By

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The purpose of the reported research was to construct, edit, test on a national sample, and standardize three new versions of Armed Services Vocational Aptitude Battery (ASVAB), which would become ASVAB Forms 8, 9, and 10. Operational Form 7B was suggested as the example for item selection and the criterion for comparability with previous ASVAB forms. According to a specific geographic sampling plan, 16 experimental tryout booklets containing a total of 2,400 items were administered at the 64 Armed Forces examining and entrance stations (AFEES) to a sample of about 2,600 subjects. Three new forms of ASVAB were developed from a selection of these experimental items using ASVAB Form 7B as a model. These three new forms were administered at the 64 AFEESs to samples of 1,479, 1,387, and 1,442 for Forms 8, 9, and 10, respectively. These AFEES subjects were also

Item 20 (Continued)

administered ASVAb Form 7B. Descriptive statistics were computed for each subtest and composite of the new forms, and each new form was equated to identically named subtests and composites of ASVAB 7B.

The results indicate that the new Forms 8, 9, and 10 are equivalent to ASVAB 7B.

PREFACE

The work reported in this study was performed under project 7719, Air Force Personnel Systems Development on Selection, Assignment, Evaluation, Quality Control, Retention, Promotion, and Utilization; task 771910, Armed Forces Operational Selection and Classification Programs. The technical monitor for the project was Dr. Malcolm James Ree.

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DEVELOPMENT OF THE ARMED SERVICES VOCATIONAL APTITUDE BATTERY: FORMS 8, 9, AND 10

I. INTRODUCTION

In order to meet the needs of all the Armed Services, new forms of the Armed Services Vocational Aptitude Battery (ASVAB) must periodically be developed, refined, and standardized on an appropriate normative sample. Since one of the uses of the ASVAB is to determine candidate suitability for military service, it is necessary for the standardization sample to be broadly representative of the national applicant body; and since the preparation of replacement ASVAB Forms constitutes a significant revision, parallelism of new forms with each other and with previous ASVAB Forms must be achieved.

The purpose of the reported research was to construct, edit, test on a national sample, and standardize three new versions of ASVAB, which would become ASVAB Forms 8, 9, and 10. Operational Form 7 was suggested as the example for item selection and the criterion for comparability with previous ASVAB Forms.

II. METHOD

Initial Item Selection and Editing

Approximately 2500 item cards were obtained from the Monitoring Agency. After review, revision, and editing, to insure homogeneous wording and grammatical agreement of stems and options, 2400 items were selected. Most were "new" items, chosen from the cards provided, but a few had been used in previous ASVAB Forms other than 7.

Construction of Tryout Booklets

These items were assembled into 16 tryout tests of approximately equal difficulty. Two forms (A and B) of each tryout booklet were prepared, so that no item would always be last and thus frequently omitted. Test time for each booklet was 90 minutes.

Administration of Experimental Items

According to the geographic sampling plan, these 16 tryout booklets were administered at the 64 Armed Forces Entrance and Examination Stations (AFEES), with each station testing only four booklets. Booklets, answer sheets, and administrative instructions were provided. The subjects for the tryout cycle were randomly sampled applicants appearing at the AFEES for possible qualification for military enlistment. The number of subjects required from the various AFEES ranged from 28 to 84, for a total projected sample of 3200. Three weeks were allowed for this testing cycle, and answer sheets for 2588 applicants were received, representing a loss of 19%.

Assembly of ASVAB Forms 8, 9, and 10

Using ASVAB 7 items as models, three new ASVAB Forms were developed from items tried out in the experimental testing cycle. The three new forms closely resembled each other and ASVAB 7 in terms of individual item difficulty and discrimination level. Test time for each experimental ASVAB was two hours, 30 minutes.

Administration of the New ASVAB Forms

ASVAB Forms 8, 9, and 10 were administered at the 64 AFEES. Only one form was sent to each Station for experimental administration, and each subject also took ASVAB 7B. Subjects for this testing cycle were to be randomly selected from the applicants for enlistment. The numbers

required from each AFEES varied from 52 to 120, for a total projected sample of 6000.

Five weeks were allowed for this testing, and a total of 4308 usable sets of answer sheets were returned, representing a loss of over 27%. The reported samples include both male and female, urban and rural, applicants, with 1479, 1387, and 1442 subjects taking ASVAB Forms 8, 9, and 10, respectively. It is not felt that the reported loss represents any particular geographical bias.

III. RESULTS

ASVAB 8

Table 1 displays descriptive statistics for the subtests and composites of ASVAB 8. For purposes of comparison, Table 2 presents similar statistics for ASVAB 7B, derived from the sample that took both 8 and 7B.

Excluding the two speeded subtests of Numerical Operations and Attention to Detail, the differences in subtest means for the two ASVAB forms range from 0.042 to 0.622, with no systematic directional trend. The differences between comparable ASVAB 8 and 7B standard deviations range from 0.004 to 1.264, with the standard deviations for Form 8 generally slightly higher. Other distributional statistics for subtests and composites show similar agreement between the two ASVAB forms.

Table 3 presents the intercorrelations of ASVAB 8 subtests, while Table 4 shows the comparable matrix for ASVAB 7B, for the sample who took this test with ASVAB 8. Correlations of ASVAB 8 subtests with the corresponding ASVAB 7B subtests are found in Table 5, which given similar correlations for ASVAB Forms 9 and 10 also.

Table 1. Distributional Statistics, ASVAB 8
N = 1479

SUBTESTS (Abbreviation)	No. of Items	Mean	Median	Std. Dev.	Skew	Kur-tosis	Reliab.	Med. Item Dif. Level	Ratio Mean/ Max. Phi	Ratio Median/ Max. Phi
General Information (GI)	15	9.099	9.155	3.274	-.099	-.855	.74	63.0	.511	.512
Numerical Operations (NO)	50	31.895	32.242	10.659	-.289	-.413	.74[a]	74.5	.834	.824
Attention to Detail (AD)	30	15.026	15.147	4.578	-.061	+.605	.54[a]	67.0	.656	.547
Word Knowledge (WK)	30	17.420	17.160	6.599	+.020	-.957	.88	61.0	.567	.559
Arithmetic Reasoning (AR)	20	10.484	10.063	4.257	+.167	-.385	.80	47.5	.490	.452
Space Perception (SP)	20	11.227	11.324	3.989	-.149	-.598	.78	62.5	.524	.505
Mathematics Knowledge (MK)	20	9.640	9.238	3.991	+.314	-.414	.75	46.5	.429	.446
Electronics Information (EI)	30	17.477	17.494	6.913	-.150	-.708	.89	60.5	.536	.549
Mechanical Comprehension (MC)	20	9.394	9.067	4.142	+.220	-.404	.78	44.0	.478	.466
General Science (GS)	20	9.435	9.123	4.147	+.127	-.605	.77	44.5	.469	.499
Shop Information (SI)	20	11.535	11.764	4.750	-.220	-.684	.84	58.5	.534	.522
Automotive Information (AI)	20	9.814	9.371	4.526	+.209	-.594	.81	51.0	.447	.416
COMPOSITES										
Mechanical (AI+MC+SI)	60	30.742	29.462	12.095	+.103	-.456	.92	50.5	.436	.420
Administrative (WK+AD+NO)	110	64.340	65.429	17.632	-.250	-.331	.95	66.0	.563	.563
General (WK+AR)	50	27.904	27.188	9.810	+.161	-.784	.91	52.5	.488	.486
Electronics (AR+SP+EI)	70	39.188	38.287	12.414	+.103	-.576	.91	54.0	.431	.422
AF Qualification Test (WK+AR+SP)	70	39.131	38.361	11.943	+.187	-.625	.91	53.5	.429	.416

[a]Kuder-Richardson reliability not appropriate for speeded tests. Intercorrelation data used for reliability here.

Table 2. Distributional Statistics, ASVAB 7, for Comparison with ASVAB 8
N = 1479

SUBTESTS (Abbreviation)	No. of Items	Mean	Median	Std. Dev.	Skew	Kurtosis
General Information (GI)	15	8.976	8.997	3.100	-.209	-.478
Numerical Operations (NO)	50	27.205	27.358	10.250	-.085	-.383
Attention to Detail (AD)	30	13.346	13.289	3.921	+.247	+.677
Word Knowledge (WK)	30	16.917	16.588	6.916	+.101	-.948
Arithmetic Reasoning (AR)	20	10.865	10.464	4.094	+.300	-.479
Space Perception (SP)	20	11.660	11.766	3.741	-.129	-.459
Mathematics Knowledge (MK)	20	10.016	9.360	3.987	+.506	-.289
Electronics Information (EI)	30	16.855	16.788	5.649	-.054	-.751
Mechanical Comprehension (MC)	20	9.540	9.101	3.707	+.390	-.432
General Science (GS)	20	9.689	9.452	3.969	+.207	-.606
Shop Information (SI)	20	11.577	11.564	3.895	-.074	-.663
Automotive Information (AI)	20	10.086	9.553	4.505	+.210	-.753
COMPOSITES						
Mechanical (AI + MC + SI)	60	31.212	30.750	10.154	+.133	-.715
Administrative (WK + AD + NO)	110	57.467	57.618	16.190	.061	-.146
General (WK + AR)	50	27.790	27.446	9.687	+.107	-.740
Electronics (AR + SP + EI)	70	39.383	38.820	10.318	+.113	-.441
AF Qualification Test (WK + AR + SP)	70	39.469	39.027	11.493	+.118	-.611

Table 3. Intercorrelation Matrix, ASVAB 8
N = 1479

GI	NO	AD	WK	AR	SP	MK	EI	MC	GS	SI	AI	SUBTESTS (Abbreviation)
1.000	.436	.193	.764	.577	.307	.555	.687	.537	.650	.565	.505	General Information (GI)
	1.000	.488	.494	.535	.255	.574	.419	.353	.419	.357	.255	Numerical Operations (NO)
		1.000	.258	.291	.274	.334	.258	.252	.239	.259	.170	Attention to Detail (AD)
			1.000	.615	.319	.589	.662	.502	.676	.509	.423	Word Knowledge (WK)
				1.000	.402	.660	.587	.558	.564	.496	.434	Arithmetic Reasoning (AR)
					1.000	.438	.437	.481	.366	.402	.338	Space Perception (SP)
						1.000	.600	.536	.583	.512	.412	Mathematics Knowledge (MK)
							1.000	.736	.722	.717	.669	Electronics Information (EI)
								1.000	.676	.713	.691	Mechanical Comprehension (MC)
									1.000	.685	.620	General Science (GS)
										1.000	.724	Shop Information (SI)
											1.000	Automotive Information (AI)

Table 4 . Intercorrelation Matrix of ASVAB 7 Subtests, for the Group taking ASVAB 7 and ASVAB 8 N = 1479

GI	NO	AD	WK	AR	SP	MK	EI	MC	GS	SI	AI	SUBTESTS (Abbreviation)
1.000	.361	.146	.613	.468	.253	.476	.515	.492	.580	.474	.442	General Information (GI)
	1.000	.361	.401	.461	.192	.519	.348	.334	.405	.250	.211	Numerical Operations (NO)
		1.000	.147	.191	.141	.229	.151	.182	.135	.115	.051	Attention to Detail (AD)
			1.000	.513	.269	.501	.513	.485	.627	.404	.360	Word Knowledge (WK)
				1.000	.307	.581	.445	.548	.506	.384	.372	Arithmetic Reasoning (AR)
					1.000	.267	.320	.443	.296	.354	.312	Space Perception (SP)
						1.000	.429	.482	.562	.310	.295	Mathematics Knowledge (MK)
							1.000	.566	.548	.523	.509	Electronics Information (EI)
								1.000	.576	.524	.536	Mechanical Comprehension (MC)
									1.000	.483	.444	General Science (GS)
										1.000	.588	Shop Information (SI)
											1.000	Automotive Information (AI)

Table 5. Intercorrelation Data
ASVAB 7 Compared with ASVAB Forms 8, 9, and 10

ASVAB 7 Subtests	Compared with Like-Named Subtests ASVAB 8 N = 1479	ASVAB 9 N = 1387	ASVAB 10 N = 1442
General Information	.636	.624	.621
Numerical Operations	.735	.711	.714
Attention to Detail	.537	.539	.592
Word Knowledge	.753	.770	.745
Arithmetic Reasoning	.603	.664	.597
Space Perception	.598	.625	.597
Mathematics Knowledge	.636	.556	.631
Electronics Information	.581	.584	.617
Mechanical Comprehension	.601	.646	.555
General Science	.631	.652	.688
Shop Information	.533	.606	.562
Automotive Information	.613	.649	.658

ASVAB 9

Table 6 shows descriptive statistics for the subtests and composites of ASVAB 9. For purposes of comparison, Table 7 presents similar statistics for ASVAB 7B, derived from the sample that took both 9 and 7B.

Excluding the two speeded subtests of Numerical Operations and Attention to Detail, the differences in subtest means for the two ASVAB forms range from 0.120 to 0.885, with no systematic directional trend. The differences between comparable ASVAB 9 and 7B standard deviations range from 0.012 to 0.596, with the standard deviations for Form 9 generally slightly higher. Other distributional statistics for subtests and composites show similar agreement between the two ASVAB forms.

Table 8 presents the intercorrelations of ASVAB 9 subtests, while Table 9 shows the comparable matrix for ASVAB 7B, for the sample who took this test with ASVAB 9. Correlations of ASVAB 9 subtests with the corresponding ASVAB 7B subtests are found in Table 5, as previously mentioned.

Table 6. Distributional Statistics, ASVAB 9
N = 1387

SUBTESTS (Abbreviation)	No. of Items	Mean	Median	Std. Dev.	Skew	Kur-tosis	Reliab.	Med. Item Dif. Level	Ratio Mean/ Max. Phi	Ratio Median/ Max. Phi
General Information (GI)	15	8.567	8.510	3.048	-.034	-.639	.69	50.0	.465	.526
Numerical Operations (NO)	50	31.934	32.089	10.700	-.249	-.520	.71[a]	74.0	.824	.784
Attention to Detail (AD)	30	15.146	15.062	4.543	+.144	+.394	.54[a]	59.0	.651	.580
Word Knowledge (WK)	30	17.074	17.058	6.821	-.006	-.950	.89	55.0	.547	.569
Arithmetic Reasoning (AR)	20	10.291	9.602	4.327	+.386	-.585	.81	49.5	.507	.503
Space Perception (SP)	20	11.839	11.728	4.360	-.025	-.694	.82	61.0	.557	.546
Mathematics Knowledge (MK)	20	9.013	8.308	4.146	+.607	-.197	.77	44.5	.423	.434
Electronics Information (EI)	30	16.727	16.743	6.398	-.056	-.749	.86	55.0	.477	.469
Mechanical Comprehension (MC)	20	9.454	9.089	3.876	+.273	-.445	.75	46.0	.463	.479
General Science (GS)	20	9.932	9.545	4.356	+.201	-.669	.79	50.5	.479	.515
Shop Information (SI)	20	11.508	11.343	4.381	-.089	-.659	.80	54.5	.471	.446
Automotive Information (AI)	20	9.127	8.368	4.316	+.490	-.370	.78	45.0	.422	.426
COMPOSITES										
Mechanical (AI+MC+SI)	60	30.089	28.087	11.014	+.314	-.433	.90	48.0	.395	.396
Administrative (WK+AD+NO)	110	64.154	64.760	17.693	-.218	-.341	.95	63.0	.554	.540
General (WK+AR)	50	27.366	26.907	10.184	+.168	-.798	.91	52.0	.487	.499
Electronics (AR+SP+EI)	70	38.858	37.810	12.568	+.206	-.580	.92	55.0	.417	.406
AF Qualification Test (WK+AR+SP)	70	39.205	38.131	12.852	+.215	-.646	.92	53.0	.443	.432

[a]Kuder-Richardson reliability not appropriate for speeded tests. Intercorrelation data used for reliability here.

Table 7. Distributional Statistics, ASVAB 7, for Comparison with ASVAB 9
N = 1387

SUBTESTS (Abbreviation)	No. of Items	Mean	Median	Std. Dev.	Skew	Kurtosis
General Information (GI)	15	8.733	8.774	3.148	-.139	-.519
Numerical Operations (NO)	50	27.203	27.561	10.254	-.135	-.493
Attention to Detail (AD)	30	13.224	13.253	3.845	-.024	+.721
Word Knowledge (WK)	30	16.748	16.302	7.066	+.108	-1.026
Arithmetic Reasoning (AR)	20	10.671	10.135	4.272	+.234	-.549
Space Perception (SP)	20	11.368	11.236	3.803	-.016	-.467
Mathematics Knowledge (MK)	20	9.898	9.233	4.134	+.406	-.372
Electronics Information (EI)	30	16.516	16.347	5.802	+.008	-.679
Mechanical Comprehension (MC)	20	9.135	8.726	3.725	+.414	-.287
General Science (GS)	20	9.427	9.174	4.016	+.214	-.550
Shop Information (SI)	20	10.996	10.543	3.991	+.050	-.489
Automotive Information (AI)	20	9.247	8.637	4.461	+.429	-.562
COMPOSITE						
Mechanical (AI + MC + SI)	60	29.386	27.935	10.301	+.265	-.546
Administrative (WK + AD + NO)	110	57.198	57.487	16.612	-.188	-.224
General (WK + AR)	50	27.418	26.542	10.104	+.130	-.755
Electronics (AR + SP + EI)	70	38.581	38.048	10.949	+.030	-.214
AF Qualification Test (WK + AR + SP)	70	38.795	38.610	12.083	+.058	-.561

Table 8. Intercorrelation Matrix, ASVAB 9
N = 1387

GI	NO	AD	WK	AR	SP	MK	EI	MC	GS	SI	AI	SUBTESTS (Abbreviation)
1.000	.416	.200	.714	.608	.404	.569	.699	.577	.678	.597	.541	General Information (GI)
	1.000	.452	.496	.526	.307	.537	.412	.373	.428	.315	.243	Numerical Operations (NO)
		1.000	.242	.277	.256	.301	.227	.241	.207	.148	.120	Attention to Detail (AD)
			1.000	.652	.410	.616	.699	.556	.[illegible]	.591	.459	Word Knowledge (WK)
				1.000	.478	.752	.627	.602	.609	.541	.451	Arithmetic Reasoning (AR)
					1.000	.512	.475	.584	.458	.432	.416	Space Perception (SP)
						1.000	.615	.609	.621	.538	.432	Mathematics Knowledge (MK)
							1.000	.697	.742	.728	.633	Electronics Information (EI)
								1.000	.644	.662	.611	Mechanical Comprehension (MC)
									1.000	.672	.550	General Science (GS)
										1.000	.675	Shop Information (SI)
											1.000	Automotive Information (AI)

Table 9. Intercorrelation Matrix of ASVAB 7 Subtests, for the Group taking ASVAB 7 and ASVAB 9
N = 1387

GI	NO	AD	WK	AR	SP	MK	EI	MC	GS	SI	AI	SUBTESTS (Abbreviations)
1.000	.406	.201	.630	.486	.313	.412	.507	.511	.567	.511	.478	General Information (GI)
	1.000	.369	.449	.499	.279	.481	.349	.387	.433	.326	.226	Numerical Operations (NO)
		1.000	.203	.246	.213	.215	.181	.214	.191	.166	.114	Attention to Detail (AD)
			1.000	.562	.308	.461	.507	.509	.630	.437	.384	Word Knowledge (WK)
				1.000	.391	.508	.463	.533	.512	.476	.411	Arithmetic Reasoning (AR)
					1.000	.304	.326	.467	.330	.374	.296	Space Perception (SP)
						1.000	.478	.433	.460	.322	.259	Mathematics Knowledge (MK)
							1.000	.515	.498	.513	.463	Electronics Information (EI)
								1.000	.524	.583	.522	Mechanical Comprehension (MC)
									1.000	.505	.435	General Science (GS)
										1.000	.604	Shop Information (SI)
											1.000	Automotive Information (AI)

ASVAB 10

Table 10 presents descriptive statistics for the subtests and composites of ASVAB 10. For purposes of comparison, Table 11 presents similar statistics for ASVAB 7B, derived from the sample that took both 10 and 7B.

Excluding the two speeded subtests of Numerical Operations and Attention to Detail, the differences in subtest means for the two ASVAB forms range from 0.055 to 0.867, with no systematic directional trend. The differences between comparable ASVAB 10 and 7B standard deviations range from 0.020 to 1.033, with the standard deviations for Form 10 generally slightly higher. Other distributional statistics for subtests and composites show similar agreement between the two ASVAB forms.

Table 12 presents the intercorrelations of ASVAB 10 subtests, while Table 13 shows the comparable matrix for ASVAB 7B, for the sample who took this test with ASVAB 10. Correlations of ASVAB 10 subtests with the corresponding ASVAB 7B subtests are found in Table 5, as previously mentioned.

Table 10. Distributional Statistics, ASVAB 10
N = 1442

SUBTESTS (Abbreviation)	No. of Items	Mean	Median	Std. Dev.	Skew	Kur-tosis	Reliab.	Med. Item Dif. Level	Ratio Mean/ Max, Phi	Ratio Median/ Max. Phi
General Information (GI)	15	8.668	8.738	3.294	-.109	-.838	.73	50.5	.480	.479
Numerical Operations (NO)	50	31.464	31.813	10.713	-.226	-.556	.71[a]	72.5	.829	.830
Attention to Detail (AD)	30	15.216	15.109	4.696	+.044	+.134	.59[a]	61.0	.623	.563
Word Knowledge (WK)	30	17.714	17.976	6.984	-.113	-.998	.90	59.0	.593	.578
Arithmetic Reasoning (AR)	20	10.189	9.722	4.044	+.351	-.381	.74	46.5	.449	.431
Space Perception (SP)	20	11.397	11.250	4.343	+.029	-.768	.77	47.0	.497	.513
Mathematics Knowledge (MK)	20	9.440	8.946	4.006	+.453	-.304	.74	45.5	.411	.425
Electronics Information (EI)	30	17.988	18.782	7.043	-.363	-.749	.89	60.0	.540	.531
Mechanical Comprehension (MC)	20	9.472	9.009	4.258	+.246	-.566	.79	47.5	.456	.466
General Science (GS)	20	10.077	9.734	4.522	+.106	-.791	.82	50.0	.499	.506
Shop Information (SI)	20	12.031	12.298	4.666	-.272	-.708	.83	58.5	.533	.507
Automotive Information (AI)	20	10.214	9.492	4.980	+.191	-.911	.85	50.5	.524	.496
COMPOSITES										
Mechanical (AI+CM+SI)	60	31.716	30.370	12.496	+.111	-.715	.93	51.0	.451	.457
Administrative (WK+AD+NO)	110	64.390	65.389	18.249	-.270	-.417	.95	62.5	.575	.599
General (WK+AR)	50	27.903	27.862	10.135	+.036	-.842	.91	53.5	.498	.489
Electronics (AR+SP+EI)	70	39.574	39.694	12.893	+.010	-.754	.92	56.0	.427	.432
AF Qualification Test (WK+AR+SP)	70	39.300	38.639	12.924	+.123	-.725	.92	55.5	.442	.441

[a]Kuder-Richardson reliability not appropriate for speeded tests. Intercorrelation data used for reliability here.

Table 11. Distributional Statistics, ASVAB 7, for Comparison with ASVAB 10
N = 1442

SUBTESTS (Abbreviations)	No. of Items	Mean	Median	Std. Dev.	Skew	Kurtosis
General Information (GI)	15	9.056	9.135	3.054	-.184	-.519
Numerical Operations (NO)	50	27.231	27.704	10.478	-.129	-.584
Attention to Detail (AD)	30	13.268	13.385	3.969	+.088	+.364
Word Knowledge (WK)	30	17.226	17.385	6.964	-.015	-1.040
Arithmetic Reasoning (AR)	20	11.038	10.678	4.316	+.155	-.653
Space Perception (SP)	20	11.587	11.515	3.873	-.067	-.483
Mathematics Knowledge (MK)	20	10.074	9.290	4.212	+.430	-.420
Electronics Information (EI)	30	17.121	17.067	6.010	-.137	-.712
Mechanical Comprehension (MC)	20	9.616	9.189	3.821	+.353	-.449
General Science (GS)	20	9.883	9.540	4.117	+.158	-.575
Shop Information (SI)	20	11.589	11.293	3.950	-.007	-.521
Automotive Information (AI)	20	10.159	9.331	4.657	+.286	-.723
COMPOSITES						
Mechanical (AI + MC + SI)	60	31.365	30.730	10.426	+.114	-.632
Administrative (WK + AD + NO)	110	57.740	58.541	16.918	-.209	-.335
General (WK + AR)	50	28.281	28.132	10.088	-.011	-.896
Electronics (AR + SP + EI)	70	39.749	39.355	11.103	-.040	-.306
AF Qualification Test (WK + AR + SP)	70	39.868	39.813	12.210	-.032	-.646

Table 12. Intercorrelation Matrix, ASVAB 10
N = 1442

GI	NO	AD	WK	AR	SP	MK	EI	MC	GS	SI	AI	SUBTESTS (Abbreviation)
1.000	.472	.266	.752	.654	.449	.586	.674	.620	.718	.607	.564	General Information (GI)
	1.000	.504	.517	.516	.294	.536	.431	.402	.431	.385	.298	Numerical Operations (NO)
		1.000	.295	.308	.253	.344	.285	.317	.245	.264	.183	Attention to Detail (AD)
			1.000	.665	.450	.587	.687	.597	.743	.581	.518	Word Knowledge (WK)
				1.000	.518	.708	.610	.647	.628	.576	.519	Arithmetic Reasoning (AR)
					1.000	.465	.465	.559	.471	.468	.400	Space Perception (SP)
						1.000	.589	.601	.598	.548	.467	Mathematics Knowledge (MK)
							1.000	.737	.758	.779	.748	Electronics Information (EI)
								1.000	.680	.707	.659	Mechanical Comprehension (MC)
									1.000	.693	.614	General Science (GS)
										1.000	.762	Shop Information (SI)
											1.000	Automotive Information (AI)

Table 13 Intercorrelation Matrix of ASVAB 7 Subtests, for the Group taking ASVAB 7 and ASVAB 10 N = 1442

GI	NO	AD	WK	AR	SP	MK	EI	MC	GS	SI	AI	SUBTESTS (Abbreviation)
1.000	.384	.174	.593	.469	.351	.483	.521	.461	.606	.500	.494	General Information (GI)
	1.000	.394	.448	.482	.313	.510	.332	.325	.436	.304	.248	Numerical Operations (NO)
		1.000	.201	.232	.240	.254	.192	.227	.203	.185	.137	Attention to Detail (AD)
			1.000	.507	.341	.504	.486	.426	.652	.418	.357	Word Knowledge (WK)
				1.000	.370	.549	.436	.468	.501	.420	.377	Arithmetic Reasoning (AR)
					1.000	.377	.332	.398	.381	.343	.293	Space Perception (SP)
						1.000	.448	.460	.554	.386	.360	Mathematics Knowledge (MK)
							1.000	.500	.574	.552	.552	Electronics Information (EI)
								1.000	.507	.480	.478	Mechanical Comprehension (MC)
									1.000	.517	.449	General Science (GS)
										1.000	.587	Shop Information (SI)
											1.000	Automotive Information (AI)

Other Analyses

Centile scores for all subtest and composite scores for the new ASVAB forms, with comparable centiles for ASVAB 7B, were computed and are found in Appendices A-1 to A-17 Equipercentile conversion tables for all subtests comprise Appendices B-1, B-2, and B-3

IV DISCUSSION

There were some aspects of the testing procedure that might have had an effect on the reported results. Because of the requirements of the so-called "Privacy Act," subjects were generally aware that both the tryout booklets and the new ASVAB Forms were experimental and would not, in contrast to the ASVAB 7 taken, affect their futures in any way. Thus both the item selection process and the statistical results for ASVAB Forms 8, 9, and 10 were subject to possible bias in ways that are, in the absence of relevant research, difficult to describe or predict. Since the item selection for ASVAB Forms 8, 9, and 10 was based on what comes very close to "volunteer" samples, and since the descriptive and correlational studies for these batteries were based on similar samples, detection of possible bias would not be likely until the new ASVAB Forms were put into operational use.

V CONCLUSIONS

Inspection of descriptive statistics for ASVAB Forms 8, 9, and 10, along with similar data for comparable ASVAB 7B samples, suggests that the three new batteries are parallel to each other and that each is substantially parallel to Form 7B, although there seems to be a tendency for the subtests of the experimental batteries to be slightly more variable than the corresponding subtests of the operational battery. In general, Word Knowledge is the most homogeneous subtest across forms, while the speeded test, Attention to Detail, is the most variable.

Since no subjects took more than one experimental form, intercorrelation of ASVAB Forms 8, 9, and 10 was not possible, but centile score tables indicate a high degree of equivalence. Reliabilities for the ASVAB 8, 9, and 10 subtests range from the speeded .54 of Forms 8 and 9 to the .90 for Word Knowledge in Form 10, and the ASVAB 7B figures are comparable, at least for these samples. Patterns of intercorrelations are also comparable. The experimental/operational subtest correlations for ASVAB 8/7B range from .537 to .753; for ASVAB 9/7B they range from .539 to .770; and for ASVAB 10/7B they range from .555 to .745.

Individual item statistics, though not reported here, were quite similar in difficulty and discrimination index across experimental forms, and the built-in parallelism with ASVAB 7 items held up well in the experimental testing.

The construction approach and test data suggest that ASVAB Forms 8, 9, and 10 can be used operationally as equivalent to ASVAB 7, subject to the caveat mentioned under IV. DISCUSSION. Investigation of possible biasing effects in the present testing procedure is recommended.

APPENDIX A:

Percentile Ranks of Subtest Scores
for ASVABs 8, 9, and 10, with Comparable
ASVAB 7 Percentiles

Table A-1. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles
Subtest - General Information

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
15	99	99	99	99	99	99
14	97	98	98	98	98	98
13	90	92	94	94	93	92
12	82	85	88	86	86	85
11	73	76	81	78	77	77
10	64	67	71	69	67	67
9	54	56	60	58	57	55
8	43	44	49	46	47	43
7	34	31	38	36	38	32
6	24	22	27	24	27	22
5	15	14	17	15	19	13
4	8	8	9	9	12	8
3	4	4	4	4	6	4
2	2	2	2	2	2	2
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-2. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Numerical Operations

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
50	99	99	99	99	99	99
49	96	99	97	99	97	99
48	94	99	94	99	94	98
47	92	98	92	98	92	97
46	90	97	88	97	90	97
45	88	96	86	96	89	96
44	86	95	85	95	87	96
43	84	94	83	94	85	95
42	82	93	81	93	83	93
41	80	92	79	92	81	91
40	76	90	76	90	78	89
39	75	88	73	87	76	87
38	72	87	70	85	73	86
37	69	85	67	83	70	83
36	66	82	64	81	67	81
35	62	80	61	78	64	77
34	58	75	57	75	59	73
33	55	71	54	71	55	70
32	51	68	51	67	52	67
31	47	65	48	63	49	63
30	43	61	44	60	45	60

(continued)

Table A-2 (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
29	39	57	41	56	42	56
28	36	54	37	54	39	53
27	33	51	34	49	35	49
26	30	47	31	45	31	45
25	27	43	28	42	29	42
24	24	40	25	39	26	39
23	22	37	22	36	24	36
22	20	33	19	33	21	34
21	17	29	17	30	19	31
20	15	26	15	27	16	28
19	13	24	13	24	15	25
18	12	19	11	20	13	20
17	10	16	9	18	12	18
16	9	15	8	16	11	16
15	7	13	7	14	9	15
14	7	12	6	12	7	13
13	6	10	5	10	6	11
12	5	9	4	9	4	10
11	4	8	3	7	3	9
10	3	7	2	6	3	7
9	3	6	2	5	2	6
8	2	3	2	3	2	3
7	2	3	2	2	1	2
6	1	2	1	2	1	2
5	1	2	1	1	1	1
4	1	1	1	1	1	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-3 Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Attention to Detail

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
30	99	99	99	99	99	99
29	99	99	99	99	99	99
28	99	99	99	99	99	99
27	99	99	99	99	99	99
26	99	99	98	99	99	99
25	98	99	98	99	98	99
24	98	99	97	99	97	99
23	96	99	96	99	96	99
22	95	99	94	98	94	98
21	93	98	92	97	91	97
20	90	97	89	96	87	96
19	85	95	84	95	82	95
18	79	93	79	94	77	93
17	73	88	72	89	70	87
16	65	81	63	83	62	81
15	53	72	54	73	54	72
14	44	62	45	64	44	62
13	35	52	35	53	36	51
12	27	41	27	41	27	42
11	21	31	20	31	20	33
10	14	25	14	23	15	26
9	10	18	10	16	11	19
8	7	8	7	9	7	9
7	5	5	4	6	5	6
6	4	3	2	4	3	4
5	3	2	1	3	2	2
4	2	1	1	2	2	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-4. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Word Knowledge

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
30	99	99	99	99	99	99
29	98	98	98	98	98	98
28	96	96	96	96	95	96
27	93	93	93	93	92	93
26	89	89	90	89	88	89
25	85	85	87	85	84	85
24	82	81	82	81	80	81
23	79	79	78	77	75	76
22	74	76	74	74	71	73
21	69	72	70	70	66	68
20	65	68	66	67	62	64
19	61	64	62	63	57	60
18	56	59	58	59	52	56
17	52	55	52	55	48	51
16	46	50	47	50	43	46
15	42	45	42	46	39	43
14	36	40	38	42	35	38
13	32	35	33	38	32	35
12	27	31	29	33	28	31
11	22	27	25	29	23	26
10	17	22	21	24	19	22
9	14	18	16	19	15	18
8	10	10	12	12	12	11
7	7	7	8	8	8	8
6	4	5	5	5	5	5
5	2	3	3	3	3	3
4	1	2	1	2	2	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-5. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Arithmetic Reasoning

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
20	99	99	99	99	99	99
19	99	99	98	99	99	96
18	96	96	96	96	97	96
17	93	93	93	93	94	93
16	89	89	89	89	91	87
15	85	85	85	84	87	81
14	82	80	81	79	84	76
13	76	75	75	73	79	70
12	70	67	70	67	73	64
11	62	59	64	60	65	57
10	54	51	58	53	56	49
9	45	43	49	44	48	41
8	35	30	39	33	37	30
7	25	21	29	24	27	23
6	16	14	19	17	18	15
5	11	9	12	11	11	9
4	7	5	7	6	6	5
3	4	2	3	2	3	3
2	2	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-6 Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Space Perception

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
20	99	99	99	99	99	99
19	99	99	96	99	98	99
18	98	98	93	98	95	98
17	95	95	88	94	90	94
16	89	89	83	90	85	89
15	83	83	78	83	79	83
14	77	75	71	79	74	74
13	70	68	65	71	68	67
12	60	57	56	62	60	59
11	51	47	48	53	52	50
10	41	38	39	43	43	40
9	34	31	31	33	34	33
8	26	20	23	22	27	22
7	18	14	17	15	21	16
6	12	9	12	10	15	9
5	8	5	8	6	9	5
4	5	3	4	3	5	3
3	2	2	2	1	2	2
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-7. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Mathematics Knowledge

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
20	99	99	99	99	99	99
19	99	99	99	99	99	99
18	98	98	97	98	98	97
17	96	95	95	95	96	94
16	94	92	93	91	94	90
15	91	89	91	88	90	87
14	87	85	88	84	86	82
13	81	80	84	79	83	78
12	76	75	80	74	78	73
11	69	69	74	69	71	67
10	62	61	69	62	65	59
9	53	52	61	53	56	53
8	43	40	52	41	45	40
7	34	30	41	31	35	30
6	23	19	31	21	25	20
5	15	11	20	13	15	13
4	8	5	12	7	8	7
3	4	3	5	3	4	3
2	2	1	2	2	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-8. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Electronics Information

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
30	99	99	99	99	99	99
29	98	99	99	99	99	99
28	96	99	98	99	97	99
27	93	98	96	98	93	97
26	90	96	94	96	88	96
25	85	94	91	93	84	91
24	81	90	87	90	79	88
23	77	87	83	87	73	83
22	73	82	79	83	68	78
21	69	76	74	78	63	72
20	65	70	70	71	58	67
19	60	63	64	66	54	61
18	56	62	60	64	49	59
17	50	55	54	58	44	53
16	45	48	49	51	40	47
15	40	40	44	44	37	40
14	35	34	37	37	33	35
13	31	29	33	32	29	29
12	26	25	28	26	24	24
11	21	20	23	23	21	21
10	17	17	19	18	17	17
9	14	14	15	15	14	14
8	10	5	11	6	11	6
7	7	4	7	4	8	4
6	5	3	5	3	6	3
5	3	2	3	2	4	2
4	2	1	1	1	2	2
3	2	1	1	1	2	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-9 Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Mechanical Comprehension

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
20	99	99	99	99	99	99
19	99	99	99	99	99	99
18	99	99	99	99	98	99
17	97	98	97	97	96	97
16	95	95	95	95	94	94
15	91	92	92	93	90	91
14	87	88	88	90	85	87
13	83	84	84	86	80	82
12	77	77	77	81	75	77
11	71	71	72	75	68	71
10	63	63	63	68	62	63
9	54	54	54	59	53	54
8	44	44	44	47	46	42
7	35	32	34	37	36	32
6	26	23	24	26	26	23
5	16	13	15	16	18	14
4	10	6	9	9	11	7
3	6	2	4	3	6	3
2	3	1	2	1	3	1
1	2	1	1	1	1	1
0	1	1	1	1	1	1

Table A-10. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - General Science

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
20	99	99	99	99	99	99
19	99	99	99	99	99	99
18	99	99	97	99	98	99
17	97	97	95	97	95	96
16	95	94	92	95	91	93
15	91	91	88	92	86	90
14	87	87	82	88	80	85
13	81	81	76	83	74	79
12	74	75	70	76	68	73
11	68	68	64	69	62	65
10	61	59	59	62	55	58
9	53	51	50	53	49	50
8	45	41	42	43	40	38
7	36	33	33	34	32	31
6	26	24	24	27	24	23
5	17	15	17	17	17	16
4	10	9	10	11	10	9
3	6	5	5	6	6	5
2	3	2	2	2	2	2
1	2	1	1	1	1	1
0	1	1	1	1	1	1

Table A-11. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Shop Information

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
20	99	99	99	99	99	99
19	98	99	98	99	97	99
18	94	98	95	98	93	98
17	89	94	90	94	87	93
16	82	88	84	89	80	87
15	76	81	79	84	72	81
14	70	73	72	78	65	73
13	63	65	65	72	58	67
12	56	58	59	65	51	59
11	49	50	52	58	45	52
10	43	43	43	50	38	43
9	35	35	35	39	32	34
8	28	23	27	27	25	22
7	21	16	19	19	19	15
6	16	10	13	12	13	9
5	11	5	8	8	8	6
4	7	3	5	5	5	3
3	4	2	2	2	2	2
2	3	1	1	1	2	1
1	2	1	1	1	1	1
0	1	1	1	1	1	1

Table A-12. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Subtest - Automotive Information

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
20	99	99	99	99	99	99
19	99	99	99	99	98	99
18	98	98	98	98	94	97
17	93	93	95	95	90	92
16	90	90	92	92	85	88
15	86	85	89	89	80	83
14	82	80	86	85	76	79
13	77	74	82	80	71	74
12	71	69	78	75	66	69
11	66	63	72	70	62	64
10	59	57	66	65	56	58
9	51	49	59	59	50	52
8	42	39	51	48	41	40
7	34	31	42	40	35	32
6	25	24	31	31	26	24
5	18	17	21	22	18	16
4	11	11	12	14	12	10
3	6	6	6	7	7	6
2	3	2	3	3	3	3
1	2	1	1	1	2	1
0	2	1	1	1	1	1

Table A-13. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Composite - Mechanical (AI + MC + SI)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
60	99	99	99	99	99	99
59	99	99	99	99	99	99
58	99	99	99	99	99	99
57	99	99	99	99	99	99
56	99	99	99	99	99	99
55	98	99	99	99	98	99
54	98	99	98	99	97	99
53	97	99	98	99	96	99
52	96	99	97	99	95	98
51	95	98	96	98	94	98
50	94	98	95	98	92	98
49	93	97	94	97	90	97
48	91	96	93	97	89	95
47	90	95	92	96	87	94
46	88	93	90	94	84	92
45	86	91	89	92	82	90
44	85	89	88	91	80	88
43	83	86	86	89	78	85
42	81	84	84	87	76	83
41	78	82	82	85	74	80
40	76	79	80	83	72	77
39	75	76	78	80	71	74

(continued)

Table A-13. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
38	73	73	76	78	68	72
37	70	70	74	76	66	69
36	68	67	71	73	65	67
35	65	64	70	70	63	64
34	63	61	67	67	60	62
33	61	58	64	65	58	59
32	58	55	62	62	56	56
31	55	52	60	60	53	53
30	53	49	57	58	50	49
29	50	46	54	55	47	46
28	47	43	51	52	44	42
27	43	40	48	48	41	39
26	40	36	44	44	38	37
25	37	33	40	40	35	33
24	33	30	36	37	33	30
23	30	26	32	32	29	25
22	27	23	27	28	27	22
21	24	20	23	25	24	19
20	20	17	20	22	21	17
19	17	13	17	18	18	14
18	14	10	14	14	15	11
17	13	8	11	11	12	8
16	10	6	8	9	10	6
15	8	5	6	6	8	5
14	6	4	5	5	6	3

(continued)

Table A-13. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
13	4	3	4	3	5	2
12	3	2	3	2	3	2
11	3	1	2	1	2	1
10	2	1	1	1	2	1
9	2	1	1	1	2	1
8	2	1	1	1	2	1
7	1	1	1	1	2	1
6	1	1	1	1	1	1
5	1	1	1	1	1	1
4	1	1	1	1	1	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-14. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Composite - Administrative (WK + AD + NO)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
110	99	99	99	99	99	99
109	99	99	99	99	99	99
108	99	99	99	99	99	99
107	99	99	99	99	99	99
106	99	99	99	99	99	99
105	99	99	99	99	99	99
104	99	99	99	99	99	99
103	99	99	99	99	99	99
102	99	99	99	99	99	99
101	99	99	99	99	99	99
100	99	99	99	99	99	99
99	99	99	99	99	99	99
98	98	99	98	99	98	99
97	98	99	98	99	98	99
96	98	99	97	99	97	99
95	97	99	97	99	97	99
94	97	99	96	99	96	99
93	96	98	96	99	96	99
92	95	98	95	99	95	99
91	94	98	94	99	94	99
90	93	98	93	98	93	98

(continued)

Table A-14. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
89	92	98	92	97	92	98
88	91	98	92	97	91	98
87	90	97	91	97	90	97
86	89	97	90	96	89	97
85	87	96	89	96	87	96
84	86	95	88	95	85	95
83	85	94	86	95	84	95
82	83	93	84	94	82	94
81	82	93	82	93	80	93
80	81	92	80	92	78	92
79	79	91	78	91	77	90
78	77	90	77	90	75	89
77	75	89	75	89	73	88
76	74	88	73	88	72	87
75	72	86	72	86	70	85
74	71	85	70	84	69	83
73	69	83	69	83	67	81
72	67	82	67	81	65	79
71	65	80	64	79	64	77
70	62	78	62	77	61	75
69	60	76	60	75	59	72
68	58	74	57	73	56	70
67	55	72	56	71	54	69
66	53	70	54	69	52	66
65	50	68	51	67	50	65

(continued)

Table A-14 (continued)

Score	ASVAB-8 N = 1479	AB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
64	48	66	50	65	48	63
63	46	64	47	63	46	61
62	44	62	45	61	45	59
61	42	60	43	59	43	57
60	40	57	41	56	41	55
59	37	55	39	54	39	53
58	35	52	37	52	37	50
57	34	50	35	50	35	48
56	32	48	33	47	32	46
55	30	46	32	45	31	44
54	28	43	29	43	29	42
53	26	41	28	41	28	40
52	25	38	26	39	26	38
51	23	35	25	37	24	36
50	22	33	24	34	22	33
49	20	31	22	31	21	32
48	19	29	20	29	20	30
47	18	27	19	27	18	29
46	16	25	17	25	18	27
45	15	23	15	24	16	25
44	14	21	14	22	15	23
43	13	19	13	21	14	21
42	12	17	12	19	13	19
41	11	16	11	18	12	18
40	10	14	10	17	11	17

(continued)

Table A-14. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
39	9	13	9	15	10	15
38	8	12	8	14	9	14
37	8	11	8	12	8	12
36	7	10	7	12	7	11
35	6	9	6	10	7	10
34	5	8	5	9	6	10
33	5	7	4	8	6	9
32	4	6	4	7	5	8
31	4	5	3	6	5	7
30	3	5	3	6	4	6
29	3	4	3	5	4	5
28	3	4	3	4	3	5
27	2	3	2	3	3	4
26	2	3	2	3	2	3
25	2	3	2	3	2	3
24	2	3	2	2	2	3
23	1	2	1	2	2	2
22	1	2	1	2	2	2
21	1	2	1	2	1	2
20	1	1	1	1	1	1
19	1	1	1	1	1	1
18	1	1	1	1	1	1
17	1	1	1	1	1	1
16	1	1	1	1	1	1
15	1	1	1	1	1	1

(continued)

Table A-14. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
14	1	1	1	1	1	1
13	1	1	1	1	1	1
12	1	1	1	1	1	1
11	1	1	1	1	1	1
10	1	1	1	1	1	1
9	1	1	1	1	1	1
8	1	1	1	1	1	1
7	1	1	1	1	1	1
6	1	1	1	1	1	1
5	1	1	1	1	1	1
4	1	1	1	1	1	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-15. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Composite - General (WK + AR)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
50	99	99	99	99	99	99
49	99	99	99	99	99	99
48	99	99	98	98	99	99
47	98	98	98	98	98	98
46	97	97	97	97	98	98
45	96	97	96	96	96	97
44	95	96	94	95	95	96
43	93	94	93	94	93	94
42	91	93	92	92	91	92
41	89	91	90	90	89	90
40	87	89	88	88	87	87
39	85	87	86	86	85	85
38	83	84	83	84	82	81
37	81	82	81	81	79	79
36	78	79	78	78	77	75
35	75	76	75	75	75	71
34	73	73	73	72	71	67
33	70	69	71	69	68	65
32	67	66	68	66	64	63
31	63	63	65	63	61	59
30	60	60	62	61	58	56
29	58	57	59	58	55	54
28	54	53	55	56	52	51

(continued)

Table A-15. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
27	51	50	52	53	48	48
26	47	47	49	50	45	45
25	44	44	45	46	42	42
24	40	40	42	42	39	38
23	36	37	39	39	37	37
22	32	33	36	36	33	33
21	29	29	32	32	30	30
20	25	25	29	28	26	26
19	22	22	26	25	24	23
18	19	19	22	22	21	20
17	16	16	20	18	19	17
16	13	13	16	15	16	15
15	11	11	13	11	13	12
14	8	8	10	9	11	9
13	6	6	8	8	8	7
12	5	5	6	6	6	5
11	3	3	4	4	4	3
10	2	2	3	3	2	2
9	1	1	2	2	2	1
8	1	1	1	1	1	1
7	1	1	1	1	1	1
6	1	1	1	1	1	1
5	1	1	1	1	1	1
4	1	1	1	1	1	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-16. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Composite - Electronics (AR + SP + EI)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
70	99	99	99	99	99	99
69	99	99	99	99	99	99
68	99	99	99	99	99	99
67	99	99	99	99	99	99
66	99	99	99	99	99	99
65	99	99	98	99	99	99
64	98	99	98	99	98	99
63	97	99	97	99	97	99
62	96	99	96	99	96	98
61	96	99	95	[illegible]	95	98
60	95	98	94	97	94	98
59	94	97	93	97	93	97
58	93	97	92	96	92	96
57	91	96	91	96	91	95
56	90	95	89	95	89	93
55	88	94	88	94	88	92
54	87	92	87	92	86	90
53	85	91	85	90	85	88
52	83	88	83	88	82	86
51	82	86	82	86	80	84
50	80	85	80	84	78	82
49	77	83	77	82	75	79
48	76	81	76	80	72	76

(continued)

Table A-16. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
47	75	78	74	78	70	73
46	72	75	72	75	68	71
45	70	72	70	72	65	69
44	69	70	68	69	63	66
43	66	66	66	66	61	62
42	63	63	63	63	58	59
41	61	61	61	60	55	55
40	58	57	58	57	52	53
39	55	55	55	55	50	50
38	52	52	53	52	47	48
37	48	48	50	48	45	44
36	44	45	46	45	43	41
35	42	42	42	41	40	37
34	39	38	39	38	37	34
33	35	35	36	34	34	31
32	32	31	33	31	32	28
31	30	27	31	27	30	24
30	27	24	28	24	27	21
29	25	22	25	21	24	19
28	22	19	23	19	22	16
27	20	16	20	16	20	14
26	17	13	18	13	18	11
25	15	11	15	11	16	9
24	13	9	13	9	14	8
23	11	7	11	7	12	7
22	9	6	9	6	10	5

(continued)

Table A-16. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
21	7	5	7	5	9	4
20	5	4	5	4	7	4
19	4	3	4	3	5	3
18	3	2	3	2	5	2
17	2	2	2	2	4	2
16	2	2	2	2	3	2
15	1	1	1	1	2	1
14	1	1	1	1	2	1
13	1	1	1	1	1	1
12	1	1	1	1	1	1
11	1	1	1	1	1	1
10	1	1	1	1	1	1
9	1	1	1	1	1	1
8	1	1	1	1	1	1
7	1	1	1	1	1	1
6	1	1	1	1	1	1
5	1	1	1	1	1	1
4	1	1	1	1	1	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

Table A-17. Percentile Ranks of Subtest Scores for ASVABs 8, 9, and 10, with Comparable ASVAB-7 Percentiles.
Composite - AFQT (WK + AR + SP)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
70	99	99	99	99	99	99
69	99	99	99	99	99	99
68	99	99	99	99	99	99
67	99	99	98	99	99	99
66	99	99	98	99	99	99
65	99	99	97	99	99	99
64	98	98	97	98	98	98
63	98	98	96	98	97	98
62	97	98	95	98	96	98
61	96	97	94	97	95	97
60	95	97	93	96	93	96
59	94	96	92	96	92	95
58	93	95	91	95	91	94
57	92	94	90	94	90	93
56	91	93	89	92	89	91
55	89	91	88	91	87	89
54	87	89	87	89	85	87
53	85	87	85	87	83	85
52	84	85	83	85	81	83
51	82	83	81	83	80	80
50	80	81	79	81	77	78
49	78	78	77	79	76	76

(continued)

Table A-17. (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
48	76	76	74	76	74	73
47	75	74	72	74	72	70
46	73	71	71	71	69	68
45	70	68	69	69	67	65
44	67	65	66	66	65	62
43	65	63	63	64	62	59
42	62	60	61	61	60	56
41	59	57	59	58	57	54
40	56	55	56	56	54	52
39	54	52	54	53	52	49
38	50	48	51	50	49	47
37	46	45	48	48	46	44
36	44	42	45	45	44	41
35	41	40	43	43	42	39
34	38	37	40	40	38	36
33	35	34	37	37	36	34
32	32	30	33	33	33	31
31	29	27	30	30	30	28
30	26	23	28	27	27	25
29	23	21	25	24	25	22
28	21	19	22	22	23	20
27	17	17	19	19	20	17
26	15	14	17	17	17	15
25	12	12	15	14	15	13
24	10	10	13	12	13	11

(continued)

Table A-17 (continued)

Score	ASVAB-8 N = 1479	ASVAB-7	ASVAB-9 N = 1387	ASVAB-7	ASVAB-10 N = 1442	ASVAB-7
23	8	8	11	10	11	9
22	7	6	10	8	9	8
21	5	5	8	7	8	6
20	4	4	6	5	6	5
19	3	3	4	4	5	4
18	3	3	3	3	4	3
17	2	2	2	2	3	2
16	1	1	2	1	2	2
15	1	1	1	1	1	1
14	1	1	1	1	1	1
13	1	1	1	1	1	1
12	1	1	1	1	1	1
11	1	1	1	1	1	1
10	1	1	1	1	1	1
9	1	1	1	1	1	1
8	1	1	1	1	1	1
7	1	1	1	1	1	1
6	1	1	1	1	1	1
5	1	1	1	1	1	1
4	1	1	1	1	1	1
3	1	1	1	1	1	1
2	1	1	1	1	1	1
1	1	1	1	1	1	1
0	1	1	1	1	1	1

APPENDIX B:

Equipercentiles:
ASVAB 8 and ASVAB 7;
ASVAB 9 and ASVAB 7;
ASVAB 10 and ASVAB 7

Table B-1a. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - General Information

ASVAB 8	ASVAB 7	Percentiles
15	15	99
14	14	95
13	13	88
12	12	80
11	11	71
10	10	61
9	9	50
8	8	37
7	7	26
6	6	17
5	5	10
4	4	6
3	3	3
2	2	1
1	1	1
0	0	1

Table B-1b. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Numerical Operations

ASVAB 8	ASVAB 7	Percentile
	50	99
	49	99
	48	99
	47	99
	46	99
	45	98
50	44	98
49	43	95
48	42	92
47	41	90
46	40	88
45	39	87
44	38	85
43	37	82
42	37	80
41	36	78
40	35	76
39	34	73
38	33	70
37	32	67
36	31	63
35	30	59
34	29	56
33	28	52
32	27	49
31	26	44
30	25	40
29	24	37
28	23	34
27	22	31
26	21	28
25	21	25
24	20	23
23	19	20
22	18	18
21	17	15
20	16	13

(continued)

Table B-1b (continued)

ASVAB 8	ASVAB 7	Percentile
19	15	12
18	14	10
17	13	9
16	12	7
15	11	6
14	10	6
13	9	4
12	8	4
11	7	3
10	6	2
9	6	2
8	5	1
7	4	1
6	3	1
5	2	1
4	1	1
3	0	1
2	0	1
1	0	1
0	0	1

Table B-1c. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Attention to Detail

ASVAB 8	ASVAB 7	Percentile
	30	99
	29	99
	28	99
	27	99
30	26	99
29	26	99
28	25	99
27	24	99
26	23	98
25	22	97
24	21	96
23	20	95
22	19	93
21	19	91
20	18	87
19	17	82
18	16	76
17	15	68
16	14	58
15	13	48
14	12	39
13	12	31
12	11	23
11	10	17
10	9	11
9	8	8
8	7	5
7	6	4
6	6	3
5	5	2
4	4	1
3	3	1
2	2	1
1	1	1
0	0	1

Table B-1d. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Word Knowledge

ASVAB 8	ASVAB 7	Percentile
30	30	99
29	29	97
28	28	94
27	26	91
26	25	87
25	24	83
24	23	79
23	22	75
22	21	70
21	20	67
20	19	64
19	18	59
18	17	55
17	16	50
16	15	45
15	14	39
14	13	34
13	12	29
12	11	24
11	10	20
10	9	15
9	8	11
8	7	8
7	6	5
6	5	2
5	4	1
4	3	1
3	2	1
2	0	1
1	0	1
0	0	1

Table B-1e. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Arithmetic Reasoning

ASVAB 8	ASVAB 7	Percentile
	20	99
20	19	99
19	18	97
18	18	94
17	17	91
16	16	87
15	15	83
14	14	78
13	13	72
12	12	65
11	11	57
10	10	49
9	9	39
8	8	29
7	7	20
6	6	13
5	5	8
4	4	5
3	4	3
2	3	1
1	2	1
0	1	1
	0	1

Table B-1f. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Space Perception

ASVAB 8	ASVAB 7	Percentile
20	20	99
19	19	99
18	18	96
17	17	91
16	16	86
15	15	80
14	14	73
13	13	65
12	12	56
11	11	46
10	10	37
9	9	29
8	8	22
7	7	15
6	6	10
5	5	7
4	4	3
3	3	1
2	2	1
1	1	1
0	0	1

Table B-1g. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Mathematics Knowledge

ASVAB 8	ASVAB 7	Percentile
20	20	99
19	19	98
18	18	97
17	17	95
16	16	92
15	15	89
14	14	84
13	13	78
12	12	72
11	11	65
10	10	57
9	9	47
8	8	38
7	7	28
6	6	19
5	5	11
4	4	6
3	3	2
2	2	1
1	1	1
0	0	1

Table B-1h. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Electronics Information

ASVAB 8	ASVAB 7	Percentile
	30	99
	29	99
	28	98
30	27	98
29	26	96
28	25	94
27	24	90
26	23	87
25	23	82
24	22	78
23	21	74
22	20	70
21	19	66
20	19	62
19	18	57
18	17	52
17	16	47
16	15	42
15	15	38
14	14	33
13	13	28
12	12	23
11	11	18
10	11	15
9	10	12
8	9	9
7	8	6
6	7	4
5	6	3
4	6	2
3	5	1
2	4	1
1	3	1
0	2	1
	1	1
	0	1

Table B-1i. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Mechanical Comprehension

ASVAB 8	ASVAB 7	Percentile
	20	99
20	19	99
19	18	99
18	17	97
17	16	95
16	15	92
15	14	88
14	13	84
13	13	79
12	12	73
11	11	67
10	10	58
9	9	49
8	8	39
7	7	30
6	6	21
5	5	13
4	4	8
3	4	4
2	3	2
1	2	1
0	1	1
	0	1

Table B-1j. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - General Science

ASVAB 8	ASVAB 7	Percentile
	20	99
20	19	99
19	18	99
18	18	98
17	17	96
16	16	93
15	15	88
14	14	83
13	13	77
12	12	70
11	11	64
10	10	57
9	9	49
8	8	40
7	7	31
6	6	22
5	5	14
4	4	8
3	3	4
2	2	2
1	1	1
0	0	1

Table B-1k. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Shop Information

ASVAB 8	ASVAB 7	Percentiles
	20	99
	19	99
20	18	98
19	17	95
18	17	90
17	16	85
16	15	78
15	14	72
14	13	66
13	12	59
12	12	51
11	11	45
10	10	39
9	9	31
8	8	24
7	7	18
6	7	13
5	6	9
4	5	5
3	4	3
2	3	2
1	2	1
0	2	1
	1	1
	0	1

Table B-1L. Equipercentiles:
ASVAB 8 and ASVAB 7
N = 1479

Subtest - Automotive Information

ASVAB 8	ASVAB 7	Percentile
	20	99
20	19	99
19	18	98
18	17	95
17	16	92
16	16	88
15	15	84
14	14	79
13	13	68
11	11	62
10	10	55
9	9	46
8	8	38
7	7	29
6	6	21
5	5	14
4	4	8
3	3	4
2	2	2
1	1	2
0	0	1

Table B-2a. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - General Information

ASVAB 9	ASVAB 7	Percentile
15	15	99
14	14	96
13	13	91
12	12	85
11	11	76
10	10	65
9	9	55
8	8	43
7	6	32
6	5	22
5	4	13
4	3	6
3	2	3
2	1	1
1	0	1
0	0	1

Table B-2b. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Numerical Operations

ASVAB 9	ASVAB 7	Percentile
	50	99
	49	99
	48	99
	47	99
	46	99
	45	98
50	44	98
49	43	95
48	42	93
47	41	90
46	40	87
45	39	85
44	38	84
43	37	82
42	37	80
41	36	78
40	35	74
39	34	71
38	33	68
37	32	66
36	31	62
35	30	59
34	29	55
33	28	52
32	27	49
31	26	46
30	25	42
29	24	39
28	23	35
27	22	32
26	21	29
25	20	26
24	20	23
23	19	20
22	18	17
21	17	16
20	16	14

(continued)

Table B-2b. (continued)

ASVAB 9	ASVAB 7	Percentile
19	15	12
18	14	10
17	13	9
16	12	7
15	11	6
14	10	5
13	9	4
12	8	3
11	7	2
10	6	2
9	5	1
8	4	1
7	3	1
6	3	1
5	2	1
4	1	1
3	0	1
2	0	1
1	0	1
0	0	1

Table B-2c. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Attention to Detail

ASVAB 9	ASVAB 7	Percentile
	30	99
	29	99
	28	99
	27	99
30	26	99
29	25	99
28	24	99
27	23	99
26	22	98
25	21	97
24	20	96
23	19	94
22	19	93
21	18	90
20	17	86
19	16	81
18	15	75
17	14	67
16	13	58
15	12	49
14	11	39
13	11	30
12	10	23
11	9	17
10	8	12
9	7	8
8	6	5
7	5	3
6	4	1
5	4	1
4	3	1
3	2	1
2	1	1
1	0	1
0	0	1

Table B-2d. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Word Knowledge

ASVAB 9	ASVAB 7	Percentile
30	30	99
29	29	97
28	28	94
27	27	91
26	25	88
25	24	84
24	23	80
23	22	76
22	21	72
21	20	68
20	19	64
19	18	59
18	17	54
17	16	49
16	15	44
15	14	39
14	13	35
13	12	31
12	11	26
11	10	22
10	9	18
9	8	14
8	7	10
7	6	6
6	5	4
5	4	2
4	3	1
3	2	1
2	1	1
1	0	1
0	0	1

Table B-2e. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Arithmetic Reasoning

ASVAB 9	ASVAB 7	Percentile
20	20	99
19	19	96
18	18	93
17	17	90
16	16	87
15	15	83
14	14	78
13	13	72
12	12	66
11	11	60
10	10	53
9	9	44
8	8	34
7	7	24
6	6	16
5	5	9
4	4	4
3	3	2
2	2	1
1	1	1
0	0	1

Table B-2f. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Space Perception

ASVAB 9	ASVAB 7	Percentile
	20	99
	19	99
20	18	98
19	17	94
18	16	89
17	16	85
16	15	80
15	14	74
14	13	67
13	12	60
12	11	52
11	10	43
10	9	34
9	8	27
8	7	20
7	6	14
6	6	10
5	5	6
4	4	3
3	3	1
2	2	1
1	1	1
0	0	1

Table B-2g. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Mathematics Knowledge

ASVAB 9	ASVAB 7	Percentile
20	20	99
19	19	98
18	18	96
17	17	94
16	16	92
15	15	89
14	14	86
13	13	82
12	12	77
11	11	71
10	10	64
9	9	56
8	8	46
7	7	36
6	6	25
5	5	16
4	4	8
3	3	3
2	2	1
1	1	1
0	0	1

Table B-2h. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Electronics Information

ASVAB 9	ASVAB 7	Percentile
	30	99
	29	99
30	28	99
29	27	98
28	26	97
27	26	94
26	25	91
25	24	88
24	23	84
23	22	80
22	21	76
21	20	71
20	19	66
19	18	61
18	17	56
17	16	51
16	15	45
15	14	40
14	14	35
13	13	30
12	12	25
11	11	21
10	10	17
9	9	13
8	8	9
7	7	6
6	6	4
5	5	2
4	4	1
3	3	1
2	2	1
1	2	1
0	1	1
	0	1

Table B-2i. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Mechanical Comprehension

ASVAB 9	ASVAB 7	Percentile
	20	99
20	19	99
19	18	99
18	17	98
17	16	96
16	15	93
15	14	89
14	13	85
13	12	80
12	11	74
11	10	67
10	9	58
9	8	49
8	7	39
7	6	28
6	5	19
5	4	11
4	3	6
3	2	3
2	1	1
1	1	1
0	0	1

Table B-2j. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - General Science

ASVAB 9	ASVAB 7	Percentile
	20	99
	19	99
20	18	99
19	18	98
18	17	96
17	16	93
16	15	89
15	14	85
14	13	79
13	12	73
12	11	67
11	10	61
10	9	54
9	8	45
8	7	37
7	6	28
6	5	20
5	4	13
4	3	7
3	2	3
2	2	1
1	1	1
0	0	1

Table B-2k. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Shop Information

ASVAB 9	ASVAB 7	Percentile
	20	99
	19	99
20	18	99
19	18	96
18	17	92
17	16	87
16	15	81
15	14	74
14	13	68
13	12	61
12	11	55
11	10	46
10	9	38
9	8	30
8	7	23
7	6	16
6	6	11
5	5	6
4	4	3
3	3	2
2	2	1
1	1	1
0	0	1

Table B-2L. Equipercentiles:
ASVAB 9 and ASVAB 7
N = 1387

Subtest - Automotive Information

ASVAB 9	ASVAB 7	Percentile
20	20	99
19	19	98
18	18	96
17	17	93
16	16	90
15	15	87
14	14	84
13	13	80
12	12	75
11	11	69
10	10	62
9	9	55
8	8	46
7	7	36
6	6	25
5	5	16
4	4	8
3	3	4
2	2	2
1	1	1
0	0	1

Table B-3a. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - General Information

ASVAB 10	ASVAB 7	Percentile
15	15	99
14	14	95
13	13	89
12	12	81
11	11	71
10	10	62
9	9	52
8	8	42
7	7	32
6	6	23
5	5	15
4	4	9
3	3	[illegible]
2	2	1
1	1	1
0	0	1

Table B-3b. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Numerical Operations

ASVAB 10	ASVAB 7	Percentile
	50	99
	49	99
	48	99
	47	99
	46	98
50	45	98
49	44	95
48	43	93
47	42	91
46	41	89
45	40	87
44	39	85
43	38	83
42	37	81
41	36	79
40	35	76
39	34	73
38	33	71
37	32	68
36	31	65
35	30	61
34	29	56
33	28	53
32	28	50
31	27	47
30	26	43
29	25	40
28	24	36
27	23	33
26	22	30
25	21	27
24	20	24
23	19	22
22	18	20
21	17	17
20	16	15

(continued)

Table B-3b. (continued)

ASVAB 10	ASVAB 7	Percentile
19	15	13
18	14	12
17	13	10
16	12	9
15	11	7
14	10	6
13	9	4
12	8	3
11	7	2
10	6	2
9	5	2
8	5	1
7	4	1
6	3	1
5	2	1
4	1	1
3	0	1
2	0	1
1	0	1
0	0	1

Table B-3c. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Attention to Detail

ASVAB 10	ASVAB 7	Percentile
	30	99
	29	99
	28	99
	27	99
30	26	99
29	25	99
28	24	99
27	23	99
26	22	98
25	21	97
24	21	96
23	20	94
22	19	92
21	18	88
20	17	84
19	16	79
18	15	73
17	14	65
16	13	57
15	13	48
14	12	39
13	11	31
12	10	23
11	9	17
10	8	12
9	7	8
8	6	5
7	6	4
6	5	2
5	4	1
4	3	1
3	2	1
2	1	1
1	0	1
0	0	1

Table B-3d. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Word Knowledge

ASVAB 10	ASVAB 7	Percentile
	30	99
30	29	98
29	28	96
28	27	93
27	26	89
26	25	85
25	24	81
24	23	77
23	22	72
22	21	68
21	20	63
20	19	59
19	18	54
18	17	50
17	16	45
16	15	40
15	14	36
14	13	33
13	12	29
12	11	24
11	10	20
10	9	17
9	8	13
8	7	10
7	6	6
6	5	3
5	4	2
4	3	1
3	2	1
2	1	1
1	0	1
0	0	1

Table B-3e. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Arithmetic Reasoning

ASVAB 10	ASVAB 7	Percentile
20	20	99
19	19	97
18	18	95
17	17	92
16	16	89
15	15	85
14	14	81
13	13	76
12	12	69
11	11	61
10	10	52
9	9	42
8	8	32
7	7	22
6	6	14
5	5	8
4	4	4
3	3	1
2	2	1
1	1	1
0	0	1

Table B-3f. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Space Perception

ASVAB 10	ASVAB 7	Percentile
	20	99
20	19	99
19	18	96
18	17	92
17	16	87
16	15	82
15	14	76
14	13	71
13	12	64
12	12	56
11	11	47
10	10	38
9	9	31
8	8	24
7	7	17
6	6	12
5	5	7
4	4	3
3	3	1
2	2	1
1	1	1
0	0	1

Table B-3g. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Mathematics Knowledge

ASVAB 10	ASVAB 7	Percentile
20	20	99
19	19	98
18	18	96
17	17	94
16	16	92
15	15	88
14	14	84
13	13	80
12	12	75
11	11	68
10	10	60
9	9	50
8	8	40
7	7	30
6	6	20
5	5	11
4	4	6
3	3	3
2	2	1
1	1	1
0	0	1

Table B-3h. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Electronics Information

ASVAB 10	ASVAB 7	Percentile
	30	99
	29	99
	28	99
30	27	99
29	26	97
28	25	95
27	25	90
26	24	86
25	23	81
24	22	75
23	21	70
22	20	65
21	19	60
20	19	55
19	18	51
18	17	46
17	16	42
16	15	38
15	14	34
14	13	30
13	13	26
12	12	22
11	11	19
10	10	15
9	9	12
8	8	10
7	7	7
6	7	5
5	6	3
4	5	2
3	4	1
2	3	1
1	2	1
0	1	1
	0	1

Table B-3i. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Mechanical Comprehension

ASVAB 10	ASVAB 7	Percentile
	20	99
20	19	99
19	18	98
18	17	97
17	16	94
16	15	91
15	14	87
14	13	82
13	12	77
12	12	71
11	11	64
10	10	57
9	9	49
8	8	41
7	7	31
6	6	22
5	5	15
4	4	8
3	3	4
2	2	2
1	2	1
0	1	1
	0	1

Table B-3j. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - General Science

ASVAB 10	ASVAB 7	Percentile
	20	99
20	19	99
19	18	98
18	17	96
17	16	92
16	15	88
15	14	82
14	13	77
13	12	71
12	11	65
11	10	58
10	9	51
9	8	44
8	8	36
7	7	28
6	6	20
5	5	13
4	4	8
3	3	4
2	2	2
1	1	1
0	0	1

Table B-3k. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Shop Information

ASVAB 10	ASVAB 7	Percentile
	20	99
	19	99
20	18	98
19	17	94
18	16	89
17	15	83
16	15	75
15	14	68
14	13	61
13	12	54
12	11	48
11	10	41
10	10	35
9	9	28
8	8	22
7	7	16
6	6	10
5	5	7
4	4	4
3	4	2
2	3	1
1	2	1
0	1	1
	0	1

Table B-3L. Equipercentiles:
ASVAB 10 and ASVAB 7
N = 1442

Subtest - Automotive Information

ASVAB 10	ASVAB 7	Percentile
	20	99
20	19	99
19	18	96
18	17	92
17	16	87
16	15	82
15	14	78
14	13	73
13	12	68
12	11	64
11	10	59
10	10	53
9	9	45
8	8	38
7	7	31
6	6	22
5	5	15
4	4	9
3	3	5
2	2	2
1	1	1
0	0	1

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